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LOW PROFILE INTAKE MANIFOLD HEATER

ABSTRACT OF THE DISCLOSURE

A heating device for use in the cylinder head of an internal combustion engine for heating the airflow entering the cylinder head from the intake manifold. The improved heating device includes an electric heating element coupled to a frame which includes a perimeter mounting member and a recessed body portion. An aperture is formed in the recessed body portion to accommodate a terminal assembly that is adapted to pass through said aperture and a bore formed in the cylinder head. A power source may be electrically connected to the portion of the terminal assembly that extends beyond the cylinder head. The improved heating device allows the heating element to be recessed into the cylinder head thereby permitting the cylinder intake airflow to be heated without significantly increasing the distance between engine parts located above and below the heater. Additionally, the electric connection to the heating element may be located remote from sealing gaskets used to mount the heating device frame to the cylinder head thereby reducing the risk of electrical shorts due to gasket aging.